ELLs TEACHING STRATEGIES FOR THE BLIND VISUALLY IMPAIRED STUDENTS

Presented to
the Graduate Program of
Greensboro College

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in
Teaching English to Speakers of Other Languages

by
Yurany Delgado Giraldo

November 2019

Advisor: Ms. Paula Wilder

Abstract

Despite the growing body of research studies and projects related to English language learners (ELLs) for the average learner, there is still a significant lack of research addressing the foreign language learning needs of the visually impaired students. Having a child with blindness in the classroom is a challenge because the spontaneous information of the environment is reduced, distorted, and needs other senses, included hearing, touch, or smell, as well as the data that other people can provide to help students to know the environment. Therefore, this paper has the primary objective to propose ELLs teaching strategies for the blind or visually impaired students through multisensory activities and hands-on experiences with real objects and situations.

Also, the procedures recommended in this project not only help to develop concepts of phonics, vocabulary, ideas for reading aloud but also, the strategies are editable and adaptable to the needs of each instructor, and visually impaired student. Furthermore, an introduction to braille as a code that allows students of this population to read and write. The application of this project is expected to contribute to the overlooked field of foreign language teaching for learners with visual impairment.

Dedication

I would like to thank my sister Stephanie. Without her love and support I would have been unable to complete this thesis. I am grateful to her.

Acknowledgments

I would like to express my appreciation to my advisor Paula Wilder, for showing interest in my project and guiding me to complete this thesis, and Dr. Michelle Plaisance for her encouragement during the program.

Table of Contents

Title Page i

Abstract ii

Dedication iii

Acknowledgments iv

Table of Contents v

List of Figures vi

Chapters

1. Chapter One: Introduction 1
2. Chapter Two: Literature Review 5
3. Chapter Three: Project Design. 19
4. Chapter Four: Final Project- Teacher´s guide . . . 22
5. Chapter Five: Conclusion 44

References 46

List of Figures

Figure 4.1 Screenshot from robo braille 31

Figure 4.2 Screenshot from Three little pigs by Wales Tales . . . 37

Figure 4.3 Screenshot from Three little pigs by Wales Tales . . . 38

Figure 4.4 Screenshot from Three little pigs by Wales Tales . . . 38

Figure 4.5 Screenshot from Three little pigs by Wales Tales . . . 39

Figure 4.6 Screenshot from Three little pigs by Wales Tales . . . 39

Figure 4.7 Screenshot from Three little pigs by Wales Tales . . . 40

Figure 4.8 Screenshot from Three little pigs by Wales Tales . . . 40

Figure 4.9 Screenshot from Three little pigs by Wales Tales . . . 41

Figure 4.10 Screenshot from Three little pigs by Wales Tales . . . 41

Figure 4.11 Screenshot from Three little pigs by Wales Tales . . . 42

Figure 4.12 Screenshot from Three little pigs by Wales Tales . . . 42

Figure 4.13 Screenshot from Three little pigs by Wales Tales . . . 44

Chapter 1: Introduction

Blind or visually impaired students often face limitations trying to be successful in an educational environment. Limitations include: lack of technology inside schools that could help students with any type of visual disability, instructors who are not trained to teach them, lack of materials, and the overall lack of information on how can the entire community can help students with these special needs. These limitations make it even harder to perform well, to have a full participation in society, and to have opportunities for gainful employment.

The Individuals with Disabilities Education Act (IDEA) is a "law ensuring special education services to children birth through 21," as stated by the US Department of Education, the Office of Special Education Programs (OSEP) provides funds to states and to assist them in providing a free and appropriate public education in the least restrictive environment to children with disabilities who are in need of special education. This law provides essential information for educators to help them meet IDEA ´ s requirements to guarantee that blind and visually impaired students receive the best educational services they can get from the government, and also the act ensures these students get the education they need according to the disability they might have. It provides the steps and procedures a parent should have in mind to be aware of their rights, including their right to participate in decisions regarding the provision of services to their children.

Chiefly, there are two visual disabilities: visually impaired and blind people. It is important to understand the difference between those two because it can change or vary the educational instruction of a person depending on which disability they may have. It is important to know the type of assistance required in each individual because it can also vary according to the degree and nature of their impairment. Some students might have lost their vision over the years, which means they still visual memory and they can remember some things. Others might be born blind and it definitively changes the way a teacher needs to approach or proceed with that particular student.

According to the American Foundation for the Blind, it is considered to be visually impaired if one’s best corrected vision is 20/40 or worse. This is a decreased ability to see despite wearing corrective glasses or contact lenses. Legally blind people are those who have completely or nearly complete vision loss. However, most people that are classified as “blind” have some remaining sight, and only a small percentage of people are totally without sight.

In the educational environment, students who are visually impaired can perform most of the activities that a sighted child can; of course, they need to learn them differently or use a variety of tools and materials to understand their surroundings and topics inside the classroom. A visually impaired child can learn how to read in braille rather than a regular print book, they may need to use the sense of touch in order to examine a live object or animal with their hands to understand what it is, rather than seeing the picture from a book. A blind student can, of course, use the previous strategies inside the classroom but also it is important to provide audiobooks, recordings, a note-taker (and other resources) that would also help them with their learning processes.

Presently the concept of inclusion has become relevant inside classrooms. Educators understand that literacy must be achieved by every student no matter if they might have any type of visual disability. According to the National Federation of the Blind, there are 7,675,600 blind or visually impaired people in the United States. In North Carolina, there are 285,500 of this population. With this in mind, this project is intended to find strategies that help teach blind or visually impaired students but more specifically to find strategies to teach English as a second language to blind immigrant students.

As has been noted by Cloud, Genesee, & Hamayan (2000), speaking a second language can broaden one's understanding of the values and customs of members of other cultural groups and therefore allow for greater acceptance and respect of cultural diversity. Diversity needs to include not only a cultural component, but also diversity among our students’ abilities and disabilities.

In the book Independent Travel for Students Who Are Blind Or Visually Impaired Preschool Through High School, Willoughby & Monthei (1998) think the problem that these blind immigrants experienced when attempting to learn English was that their teachers, who know how to teach English, did not know how to teach Braille or to work with this population. Conversely, Braille teachers don't know how to teach English. However, one aspect that they both share is the knowledge that reading constitutes literacy.

Dunlea, (1989) explained that one of the challenges is the lack of material in the area of second language acquisition for visually-impaired learners, perhaps due to the well-known assumption that students with visual impairment follow the same path of learning as the sighted students. Larsen-Freeman (1991) states that oral and hearing sensitivity tend to be used to a much greater extent for blind or visually impaired students than their sighted students as well as the intensive memory training that helps them to have an alternative tool instead of the vision system in learning.

It is important to keep in mind not only non-native English speakers but also those who are blind as well. Teaching a second language can be a hard task sometimes but it can definitively become a magnified situation if one student is blind. Finding strategies to help blind and visually impaired students is the basis for this thesis and will provide a teachers' guide to support non-native blind or visually impaired students in the learning process. Expecting this teachers 'guide can also be present to the community schools system, TESOL instructors, parents and anyone who might be interested in teaching a second language to blind or visually impaired student.

Chapter 2: Literature Review

Educators around the world agree that every child needs access to high-quality education regardless of incomes, impairments, backgrounds, cultures, etc. UNESCO promotes access to good-quality education as a human right and supports a rights-based approach to all educational activities (Pigozzi, 2004). Meanwhile, even with the widespread evolution of technology, instructors, and parents find students with disabilities that struggle to obtain an appropriate education that fits their needs. The purpose of this chapter is to review the literature related to the strategies to teach students with disabilities, particularly the ones with visual impairments who are immigrants to the U.S. I begin by defining key terms related to this impairment. I then explain the best learning strategies. Of equal importance, I discuss how TESOL educators can modify their instruction to help students with visual impairments in their process of learning a second language.

Visual Impairments

When conducting an educational intervention with students with visual impairments, it is necessary to know some basic concepts of visual impairment and ocular functioning. In some cases, instructors might find students who have been blind since birth. Others may have lost their vision during their first years of childhood and that means they still have some visual memories. Knowing this information would help instructors with the purpose of providing necessary information to guide student learning activities. Visual impairment is a broad concept, so instructors need to understand that not all visual impairments are the same. There are different degrees of vision and various types of visual difficulties. Foster and Resnikoff (2005) pointed out the primary causes of global blindness, such as cataracts, glaucoma, corneal scarring (from a variety of causes), age-related macular degeneration, and diabetic retinopathy. Understanding these causes, instructors can also understand what blindness implies and how the person with low vision "sees" to adequately satisfy their educational needs. Also, Douglas and McLinden (2005) described visual impairment as a term that outlines the full spectrum of the loss of visual function. Douglas, McCall, McLinden, Pavey, Ware, and Farrell (2009) explained that visual features include visual acuity, accommodation, a field of vision, color vision, and adaptability to light. Thus, defining visual acuity and field of vision would help classify and identify the type of visual impairment a student has, therefore, using this information to choose learning strategies to use in classrooms.

Visual acuity.

Levenson and Kozarsky (1990) defined visual acuity as the ability of the optical system to discern subtle distinctions in one’s environment. The presence of excellent visual acuity tells the examiner that visual media are clear, the image is clearly focused in the retina, the afferent visual pathway is functioning, and the visual cortex has appropriately interpreted signals received (Levenson & Kozarsky, 1990, pp. 352-354). Moreover, the Medical Dictionary for the Health Professions and Nursing (2012) described visual acuity as the sharpness or clarity of vision, measured as the ability to distinguish letters or other images of various sizes at a fixed distance, usually with a Snellen chart. The average rating by such means is 20/20 vision.

Visual Field.

The U.S National Library of Medicine (2019) has referred to the total area in which objects can be seen in the side (peripheral) vision as an individual focuses his/her eyes on a central point. Araluce (2009) explained the measurement and definition of the visual acuity and visual field to allow teachers to establish the type of visual impairment a student has. Then, the results helps instructors to define the best educational service the student needs. The U.S National Library of Medicine (2019) added that the loss or diminution of visual acuity refers to the distance that allows one to discriminate objects and figures. Also, the loss or reduction of the visual field refers to the total area that eyes can perceive, focusing on a central point. A student can have either visual acuity problems, visual field, or both.

In this regard, Euroblind organization (2014) explained that it is essential to know that it is possible to find students who, despite presenting visual difficulties, will be able to distinguish shapes and colors. They can find support from the different existing optical aids (e.g., lenses, magnifiers, telescopes). In the same manner, Euroblind organization (2014) added that educators may have students who will not be able to see anything at all. Students might require other adaptations and technical rescues that allow them to access visual information, mainly through the senses of touch and hearing. In this sense, knowing what blindness implies and how a person with low vision sees the world would help instructors to satisfy the educational needs of a student with any visual impairment.

Blindness.

The U.S National Library of Medicine (2019) articulated that blindness is a lack of vision. It may also refer to a loss of vision that cannot be corrected with glasses or contact lenses.

Moreover, Partenariat Educatif Grundtvig (2010) explained blindness refers to a total loss of vision, or the remaining eyesight students possess is so small that it does not allow them to develop activities using this way of perception. In this case, it would be necessary for students to learn the Braille system (Partenariat Educatif Grundtvig, 2010, p. 18)

Low vision.

The (Disabilities, Opportunities, Internetworking, and Technology) Center (DO-IT, 2019) indicated that low vision is used to describe a loss of visual acuity while retaining some vision. This impairment applies to individuals with sight who are unable to read a newspaper at a reasonable distance of viewing even with the aid of glasses or contact lenses. People with low vision often need adaptations in lighting and enlarged print to read texts. Furthermore, DO-IT (2019) added low vision refers to a diminished or insufficient visual perception, which despite the optical aids the student can use, the vision remains below the average of regular sight. This condition makes people with low vision still use this sense functionally, and many of them will be able to write and read printed texts. DO-IT (2019) also specified that people with low vision can use aids such as magnifying glasses, lenses, or other instruments that serve to magnify the characters and images students want to see.

Legislation and Expanded Core Curriculum

The U.S Department of Education (2010) has explained the Rehabilitation Act of 1973 codified Section 504, which prohibits discrimination based on disability (29 U.S.C. § 701) and ensures that students with disabilities have access to learning at school. Section 504 provides students with disabilities to receive a free, appropriate public education despite students’ conditions. Section 504 defends the rights of students with impediments regardless of the nature of or severity of their disability, mandating equal opportunity to receive program benefits and services (U.S. Department of Education, 2010).

The State education chiefs and governors in 48 states created the Common Core State Standards (CCSS), a set of clear college- and career-ready standards for kindergarten through 12th grade in English language arts/literacy and mathematics. These standards provide a clear understanding of what students are expected to learn (with or without disabilities). However, the United States also created an addition to the Common Core Standards. These standards are called The Expanded Core Curriculum (ECC), and they are designed to meet the individual needs of students with disabilities within local educational agencies. The ECC fulfills the needs of students with disabilities, so that these learners acquire the same knowledge as their peers without limitation, the Council of Chief State School Officers (CCSSO) and the National Governors Association Center for Best Practices (NGA Center) (ECC, 2019).

Expanded Core Curriculum

Willings (2019) explained that the ECC addresses the knowledge and skills needed by students with visual impairments due to their unique disability and specific needs. Willings (2019) added that the various areas of the ECC provide educators with a way of addressing the needs of students with visual impairments as well as those with additional disabilities. Moreover, Perkins School for the Blind (2010) clarified that the ECC provides a framework for instruction in a specialized set of vision-related skills for students who are blind or visually impaired, and ECC has nine areas in which students with visual impairment need specific guidance because of their vision loss. Perkin School for the Blind (2010), explained the nine areas of the Expanded Core Curriculum as it follows:

- **Compensatory Skills:** These critical skills include concept development and organizational skills, as well as communication skills, such as speaking and listening, sign language, tactile symbols, braille or print reading and writing, and the ability to access recorded material.
- **Orientation and Mobility:** Skills to help children know where they are in space and to move safely, independently, and efficiently in the environment.
- **Social Interaction:** Skills needed to participate actively and appropriately in social situations.
- **Independent Living:** Skills of daily living required to care for oneself independently, including personal hygiene, food preparation, cleaning, clothing care, and money management.
- **Recreation and Leisure:** Skills to promote the enjoyment of leisure activities, including learning new leisure activities and making choices about how to spend leisure time.
- **Sensory Efficiency:** Skills that help students to use all of their senses, including functional vision, hearing, touch, taste, and smell.
- **Assistive Technology:** Computer skills to use computers and other electronic equipment to function independently and effectively at school, home or work.
- **Career Education:** Skills that encourage students to explore career options and learn about the world of work.

- **Self-Determination:** Skills that enable students to become effective advocates for themselves based on their own needs and goals. (p. 7)

Additionally, Miller (2003) clarified that the ECC is a unique cluster of knowledge and skills explicitly needed by students with visual impairments and blindness. These skills do not replace CCSS, but are a complement for students with visual impairments. Consequently, the American Foundation for the Blind (2012) suggested that if students with visual impairments receive adequate instruction in both curriculum areas, (ECC), the chances of having appropriate educational opportunities increases. The American Foundation for the Blind (2012) explained that although academic success is essential in life, these skills would help blind or visually impaired students to become successful in other aspects of their lives.

ESL teaching strategies for students with Visual Impairments

Teaching English as a second language to an immigrant student is a challenge, and TESOL instructors have an essential role inside the classroom. The difficulty increases if educators have a blind immigrant student in their school community. Scott Baltisberger (2017), a specialist in visual impairment education, recognized that bilingual education teachers have concerns that they do not know braille. Also, teachers of students with visual impairment worry about their lack of knowledge and experience in bilingual education. However, Baltisberger (2017) explained that teaching a blind student a new language is not an impossible task, and if specialists and TESOL instructors work together, they can succeed in the mission of teaching students with visual impairments.

Teaching through other senses

Blind and visually impaired students studying a foreign language face the problem that the teaching material used is fundamentally visual. TESOL educators rely on body language, pantomimic, pictures, drawing, etc., to provide instructions in the classroom. Also, foreign language books have a graphic designs, and, therefore, the teaching of this subject is particularly complicated when there is a blind child in the classroom. However, FamilyConnect (2016) explained in their article, “Using the Senses: Developing the Senses in a Multiply Disabled Child,” that when children have a visual impairment, they need to use all of their remaining functional senses (taste, touch, smell, and hearing). Instructors can use these four senses to help students to get the most information possible about the world and what is happening in their environment.

Phonics

Renee Ellis (2017), a visual impairment specialist, shared how to introduce the alphabet to visually impaired students. Ellis (2017) explained that instructors need to use real objects to represent each letter and, with each letter of the alphabet, the student was able to touch, taste, smell or hear the vocabulary word (e.g., "A for apple," "B for banana," etc.). Ellis (2017) included, not only food items to the lessons, but also musical instruments as in X for xylophone. Ellis (2017) recommended starting with sounds first and at the end of the alphabet mixing the braille letter and sound. The reason for this is because instructors need their students to recognize sounds, vocabulary, action words, and colors before introducing the braille code as a tool for writing and reading. Ellis (2017) clarified scaffolding is essential when teaching visually impaired students.

Vocabulary

Moreover, the Program of the European Union (2015) explained how to teach vocabulary to the visually impaired students by implementing a new teaching approach called REALIA. The Program of the European Union (2015) explained that REALIA is the use and management of real objects in language teaching, REALIA are objects from real life used in classroom instruction by educators to improve students' understanding of other cultures and real-life situations. A teacher of a foreign language often employs REALIA to strengthen students' associations between words for everyday objects and the objects themselves (p. 13). Furthermore, the Program of the European Union (2015) added that this simple approach can also be easily used and it requires little or no technical adaptation as a lot of diverse objects or pieces of furniture are often readily available in the classroom or can be brought in and stored in a large box to be used over and over again. The main idea of this teaching technique is to provide students multisensorial activities that allow students to retain and learn the new vocabulary.

Similar to the previous approach, Baltisberger (2019) explained that students can use real objects (e.g., an actual pot or pan instead of a picture of a pot or pan) when learning vocabulary for cooking because when visually impaired students are learning a language, touching and exploring the object allow students to create a connection between the word and the object. Baltisberger (2019) added that for objects that are too large to fit into a classroom, such as cars or buses, toys are a great tool. However, if instructors also take students to a parking lot to experience an actual bus or car, it would give students, not only the context, but also a meaningful learning experience. Therefore, Romero and Moreno (2010) indicated educators need to put aside verbal and theoretical concepts to start having multisensory activities. Activities that allow visually impaired students to understand the world that they cannot see, but they can feel and experience (p. 63).

Moreover, an early childhood consultant for visually impaired students, explained how to present the colors to this population. Liz Eagan (2014) explained that it is possible for people to feel, taste, or even smell colors, and TESOL instructors could use this ability to introduce colors to students. Eagan (2014) described that instructors should use objects or food that have only one color to help students learn the variety of colors that there are in the world. For example, Eagan (2014) asked students to hold different pieces of wood, touch the bark of a tree, or touch the ground and explain that all these things are brown. The green color feels like the living parts of the plant because when the plants are green, it means they are alive. Eagan (2014) also explained that instructors could give a green and brown leaf to students, then asked them to hear the sound of both leaves. Students would readily associate the crunchy sound with the brown color. Furthermore, Wright (2018) described in her research how colors could also be related to emotions, mind, and body. Wright (2018) explained the color red is the one people get in their cheeks when they blush. Red is also the color people have in their minds when they think about love. The pink color is related to femininity and tranquility. Wright's (2018) research gives instructors ideas on how educating a student with visual impairment implies developing their potential and abilities, by making the most of what the environment offers.

Reading Aloud

As soon as students start having a wider range of vocabulary, TESOL educators can continue to the next step in their instruction, which is reading. Reading improves spelling and supports the development and improvement of language. Reading promotes oral and written expression and makes the language more fluent. For instance, Matt Kaplowitz (2016), Creative Director at Bridge Multimedia, explained how reading aloud to a blind or visually impaired student would create strong readers. Reading increases their vocabulary and their chance to succeed in acquiring a new language. Kaplowitz (2016) affirmed that books have many visual aids, but visually impaired students would not understand the text by just reading the words. Instructors should describe as much as they can about the pictures because the descriptions make books come alive. Consequently, TESOL instructors reading to an ESL visually impaired students need to present the main characters in the tridimensional model to students. Aquino, Martínez, and Izquierdo (2012) explained that if possible, instructors should use textures and materials that are the most lifelike and pleasant to the touch in order to help students to understand the book. Furthermore, Aquino et al. (2012) also clarified there is no need to give a scale model of every picture of the book, but instructors should use materials available in their environment and help students to model facial expressions by allowing students to touch instructors' faces to explain emotions and illustrate how feelings look like on people’s faces. From this perspective, Kaplowitz (2016) explained that instructors should choose the right book by reading it first to themselves to check unknown words and find a way to present the book to students. Kaplowitz (2016) added that before reading the book to students, instructors should describe three or four aspects of the main characters, pages, and pictures to students. This activity gives students the context of what they are going to read. Kaplowitz (2016) illustrated the best way to describe pictures to a visually impaired student is to start from the specific to the general because this is the way these students put images together and also, when describing instructors need to include colors. Kaplowitz (2016) explained that colors are part of our world, and colors are one of the major ways that people identify objects. Therefore, even if these students cannot see colors, this information is vital to them because colors help the words of the books to have meaning, and providing colors and descriptions in detail helps students better understand what they are hearing.

Braille

Finally, students need to learn braille as a tool for reading and writing, and braille will help visually impaired students to enter to the world of literacy. The American Foundation for the Blind (2019) explained that braille is a system of raised dots that can be read with the fingers by people who are blind or who have low vision. Teachers, parents, and others who are not visually impaired ordinarily read braille with their eyes, and braille is not a language. Instead, Braille is a code by which many languages, such as English, Spanish, Arabic, Chinese, and others read and write. However, TESOL instructors do not need to master the braille code; in fact, Baltisberger (2017) explained that the classroom teacher is not responsible for teaching students braille; this is the role of the specialist. Classroom teachers or TESOL instructors, in this case, are responsible for providing materials to the specialists with reasonable time, so experts can transcribe documents for visually impaired students. Furthermore, Baltisberger (2017) added that to ensure that a blind student with limited English proficiency acquires proficiency in Braille, members of the whole educational team should have a clear understanding of their respective roles and work together in a collaborative approach. Moreover, Morrow (1999) emphasized in her dissertation that it is essential that teachers of the blind and regular classroom teachers of foreign languages develop a means by which to acquire a rudimentary knowledge base in the other's area of specialization in order that dialogues between the two types of professionals can foster positive solutions for students with blindness who are studying a foreign language in the mainstream classroom environment. TESOL instructors should work along with the visual impairment specialist to create material and strategies that help the students in their process of learning a second language.

Consequently, the Tennessee Council of the Blind (TCB) (2010), specified in their article Grade 1 and Grade 2 Braille that there are two forms of braille. TCB (2010) explained that in Grade 1 Braille, each possible arrangement of dots within a cell represents only one letter, number, punctuation sign, or unique braille composition sign. Individual cells cannot represent words or abbreviations in this grade of Braille. TCB (2010) added that Grade 1 Braille is typically used only by those who are new learners of braille, and when students acquire a more extensive understanding of the code, students can proceed to Grade 2 Braille. TCB (2010) added many cell combinations have been created to represent common words, making this the most popular of the grades of braille, and a single cell represents an entire commonly used word. Also, words may be abbreviated by using a single letter to represent the entire word, using a special symbol to precede either the first or last letter of the word while truncating the rest of the word, using a double-letter contraction such as "bb" or "cc," or removing most or all of the vowels in a word in order to shorten it.

Conclusion

Instructors need to understand that helping students who have visual impairments might represent a very diverse group of learners. The level of disability is influenced by environmental factors, other disabilities, and the type and degree of visual impairment. Visual impairments may affect the student’s acuity, the student’s visual field, and/or the student’s ability to process visual information (Sacks, 1998, p. 35). Because each factor has significant implications for effective instruction, it is essential that the team to work closely with the child’s family, physicians, and vision teacher to understand the nature of the child’s visual impairment and ensure that proper techniques and strategies are used to maximize the student’s ability to access visual information and use compensatory strategies (Sacks, 1998, p. 42).

Highlighting the challenging field of teaching languages for the visually impaired learners, researchers such as Baltisberger (2017) and Romero and Moreno (2010) have suggested that the foreign language needs of the visually impaired learners should be focused more on including more activities involving the sense of touch and hearing, in other words multisensorial activities to accommodate the visually impaired learners and make their learning a meaningful experience. Moreover, Aquino et al. (2012) explained that many visually impaired students can be placed into regular classroom settings, so instructors should provide a multisensory approach to convey crucial foreign language information. In this way, students (sighted or blind students) who encounter learning deficits in one specific area will have the opportunity to learn the material through its multifaceted presentation.

In addition, regular classroom teachers should make an effort to establish a rapport with those in supporting roles who deal with students with disabilities on a daily basis (Morrow, 1999, p. 180). TESOL instructors need to work together with the specialist of the visually impaired students to find the best learning strategies for this population. Finally, further research is needed, especially related to the importance of learning strategies in special education.

Chapter Three: Project Design

In this chapter, I intend to create a teacher’s guide that supports instructors in the mainstream setting, who teach English as a foreign language and have a student who has a visual impairment in their classroom. The purpose of this teacher´s guide is to provide a broadening knowledge and understanding of the special educational needs associated with visual impairment and enhancing the conditions that favor educational processes. Also, this guide aims to respond to the needs this population has through simple and effective strategies that promote strategies to help visually impaired students in their process of learning English as a foreign language. In this regard, most learners depend on their visual and auditory senses when studying a foreign language. The role of the visual and audio materials in foreign language teaching is apparent; however, when a learner fails to use one or both of their senses, they are likely to replace it with another sense, which the teacher is to notice and address to it to achieve a successful teaching process (Kocyigit & Artar, 2015, p. 690).

When teaching visually impaired children, the Program of the European Union (2015) explained that multisensory approaches can be of particular benefit to the student in the classroom who is blind as experiential learning has been shown to enrich the learning process and helps in overcoming the challenges associated with the vision loss (p. 14). Moreover, the instructional process must include opportunities for the student to explore new objects and places and be exposed to a variety of experiences. Students must experience a variety of textures, shapes, weights, temperatures, sounds, smells, and tastes to build meaningful relationships and concepts about the environment (Carney, Engbretson, Scammell & Sheppard, 2003, p. 47).

Resources related to teach visually impaired students may vary on the Internet and include classroom settings, technological aids, fine motor skills development, social skills, family and teacher staff support, and orientation techniques, among others. However, when researching options to teach a foreign language to blind immigrant students inside the classroom, the possibilities are limited. For that reason, it is necessary and relevant to create a guide for TESOL instructors who might encounter the challenge to teach visually impaired non-native students. From this perspective, Morrow (1999) explained that the level of cooperation demonstrated by the classroom teacher or professor is a key factor in the success or failure of a student with special needs. For this reason, it is necessary to explore means by which regular classroom instructors of foreign languages can acquire basic information about the needs of students with blindness (p. 20).

The final product of this project is a teacher´s guide to help TESOL instructors to teach visually impaired students in a regular classroom setting, which explains how to teach phonics, vocabulary, reading aloud, and presenting an introduction to braille. The strategies presented in this project can be modified and adapted to the expectations of instructors and students according to their needs. The strategies were developed using multisensory activities, which Schwed and Melichar-Utter (2008) indicated that using multi-sensory activities has a positive impact on students for practicing and learning their spelling words. By using these multi-sensory avenues, students were engaged in activities, which may have helped create multiple paths to the brain to store knowledge in the long-term memory.

In addition, the strategies incorporated in this teacher´s guide aim to scaffold the process of learning a second language in visually impaired students. In this regard, the Regional Bilingual Education Resource Network (2006) explained that scaffolding represents the helpful interactions between adult and child that enable children to do something beyond their independent efforts. A scaffold is a temporary framework that is put up for support and access to meaning and taken away as needed when the child secures control of success with a task (p. 35).

Furthermore, in this project instructors will find scaffolding strategies to teach visually impaired students. From this perspective, scaffolding aims to start from the smallest to the biggest concepts, for instance, strategies that include how to teach phonics, vocabulary, reading aloud ideas, and braille as a tool for literacy. It is expected this teacher´s guide will build TESOL instructors and students' ideas and confidence in the process of teaching and learning a second language in visually impaired students.

Chapter 4: Final Project – Teacher´s Guide

Research is necessary for teachers when they have a student with visual impairment in a regular classroom setting. I have created a teacher´s guide designed to educate teachers who instruct immigrant visually impaired students. This teacher´s guide will build teachers' understanding of strategies on how to teach students of this population using multisensory activities that would help students to have meaningful learning. It will then inform teachers of the specific approaches to teach phonics, vocabulary, reading aloud and braille. By the conclusion of the handbook, teachers will be able to use their knowledge to collaboratively adapt these ideas to the needs of each instructor and students.

Introduction

Blind or visually impaired students often face limitations trying to be successful in an educational environment. Limitations include: lack of technology inside schools that could help students with any type of visual disability, instructors who are not trained to teach them, lack of materials, and the overall lack of information on how can the entire community can help students with these special needs. These limitations make it even harder to perform well, to have a full participation in society, and to have opportunities for gainful employment.

Therefore, teaching a second language can be a hard task sometimes but it can definitively become a magnified situation if one student is blind. Finding strategies to help blind and visually impaired students is the basis for this thesis and will provide a teachers' guide to support non-native blind or visually impaired students in the learning process. Expecting this teachers ‘guide can also be present to the community schools system, TESOL instructors, parents and anyone who might be interested in teaching a second language to blind or visually impaired student.

Blindness

The U.S National Library of Medicine (2019) articulated that blindness is a lack of vision. It may also refer to a loss of vision that cannot be corrected with glasses or contact lenses. Moreover, Partenariat Educatif Grundtvig (2010) explained blindness refers to a total loss of vision, or the remaining eyesight students possess is so small that it does not allow them to develop activities using this way of perception. In this case, it would be necessary for students to learn the Braille system (Partenariat Educatif Grundtvig, 2010, p. 18)

Low vision

The (Disabilities, Opportunities, Internetworking, and Technology) Center (DO-IT, 2019) indicated that low vision is used to describe a loss of visual acuity while retaining some vision. This impairment applies to individuals with sight who are unable to read a newspaper at a reasonable distance of viewing even with the aid of glasses or contact lenses. People with low vision often need adaptations in lighting and enlarged print to read texts. Furthermore, DO-IT (2019) added low vision refers to a diminished or insufficient visual perception, which despite the optical aids the student can use, the vision remains below the average of regular sight. This condition makes people with low vision still use this sense functionally, and many of them will be able to write and read printed texts. DO-IT (2019) also specified that people with low vision can use aids such as magnifying glasses, lenses, or other instruments that serve to magnify the characters and images students want to see.

Blind and visually impaired students studying a foreign language face the problem that the teaching material used is fundamentally visual. TESOL educators rely on body language, pantomimic, pictures, drawing, etc., to provide instructions in the classroom. Also, foreign language books have a graphic designs, and, therefore, the teaching of this subject is particularly complicated when there is a blind child in the classroom. However, FamilyConnect (2016) explained in their article, "Using the Senses: Developing the Senses in a Multiply Disabled Child," that when children have a visual impairment, they need to use all of their remaining functional senses (taste, touch, smell, and hearing). Instructors can use these four senses to help students to get the most information possible about the world and what is happening in their environment.

Realia

The Program of the European Union (2015) explained that REALIA is the use and management of real objects in language teaching, REALIA are objects from real life used in classroom instruction by educators to improve students' understanding of other cultures and real-life situations. A teacher of a foreign language often employs REALIA to strengthen students' associations between words for everyday objects and the objects themselves (p. 13). The main idea of this teaching technique is to provide students multisensorial activities that allow students to retain and learn the new concepts.

Multisensory activities

Multisensory learning (MSL) helps an individual learn by using more than one sense. For children with a visual impairment, the use auditory, kinesthetic, and tactile modalities can be very helpful. Experts believe that students remember what they learn while using multiple senses more effectively than while using one sense. There is scientific evidence that Multisensory Teaching is the perfect brain-food for learning. In addition, Multisensory learning ensures that all of our students, regardless of their learning preference are provided with multiple ways to learn and understand information.

When teaching visually impaired children, the Program of the European Union (2015) explained that multisensory approaches can be of particular benefit to the student in the classroom who is blind as experiential learning has been shown to enrich the learning process and helps in overcoming the challenges associated with the vision loss (p. 14). Moreover, the instructional process must include opportunities for the student to explore new objects and places and be exposed to a variety of experiences. Students must experience a variety of textures, shapes, weights, temperatures, sounds, smells, and tastes to build meaningful relationships and concepts about the environment (Carney, Engbretson, Scammell & Sheppard, 2003, p. 47).

In the next part of this teacher's guide, TESOL instructors can find a broadening knowledge and understanding of the special educational needs associated with visual impairment and enhancing the conditions that favor educational processes. Also, this guide aims to respond to the needs this population has through simple and effective strategies that promote strategies to help visually impaired students in their process of learning English as a foreign language, in a regular classroom setting, which explains how to teach phonics, vocabulary, reading aloud, and presenting an introduction to braille. The multisensory activities presented in this project can be modified and adapted to the expectations of instructors and students according to their needs.

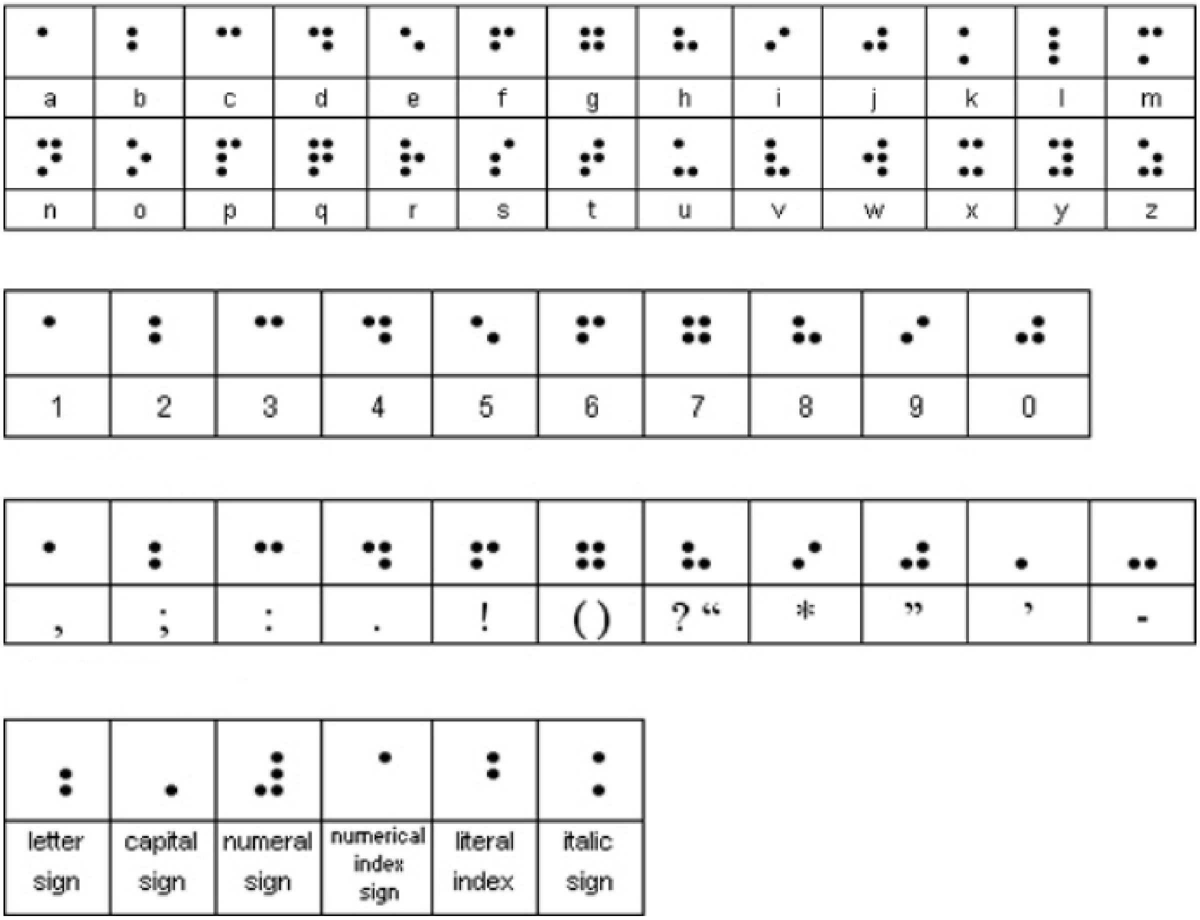
Phonics

Renee Ellis (2017), a visual impairment specialist, shared how to introduce the alphabet to visually impaired students. Ellis (2017) explained that instructors need to use real objects to represent each letter; objects that students can touch, taste, smell or hear. The sound must be introduce first, and then labelling each object with the code form helps providing exposure to conventional braille (See figure 4.1). For this purpose, here are some ideas how to introduce the alphabet to the visually impaired student.

- A for apple. Senses: The student will be able to touch, smell, and taste the first letter of the alphabet.
- B for banana. Senses: smell, touch and taste.
- C for car. Senses: touch, hearing
- D for dice. Senses: touch, hearing
- E for egg. Senses: taste, smell, touch
- F for flute. Senses: hearing, touch, taste
- G for grape. Senses: touch, smell, taste

- H for hat. Senses: touch, smell
- I for insects. They could be toys insects or real ones. Senses: touch, smell, hearing
- J for juice. Senses: smell, taste, touch
- K for keyboard. Senses: touch, hearing
- L for lime. Senses: taste, touch
- M for mouse. It could be a stuffed animal, a real mouse lab, or the gadget. Senses: touch, hearing, smell
- N for nuts. Senses: touch, taste smell
- O for orange. Senses: touch, smell, taste
- P for piano. Senses: touch and hearing
- Q for quarter. Touch: Coins can be distinguished by feeling the size differences and the smoothness and roughness of the edges.
- R for radio. Senses: hearing, touch
- S for spoon. Senses: touch, taste
- T for tomato. Senses: taste, touch, smell
- U for umbrella. Senses: touch, hearing
- V for violin. Senses: touch, hearing
- W for whistle. Senses: touch, hearing, taste
- X for xylophone. Senses: touch, hearing
- Y for yogurt. Senses: touch, smell, taste

- Z for zipper. Senses: touch and hearing.



a	b	c	d	e	f	g	h	i	j	k	l	m
n	o	p	q	r	s	t	u	v	w	x	y	z

1	2	3	4	5	6	7	8	9	0

,	;	:	.	!	( )	? “	*	”	’	-

letter sign	capital sign	numeral sign	numerical index sign	literal index	italic sign

Figure 4.1 screenshot from robo braille

Visually impaired specialist suggest that the objects present it to the students should foster more than one sense. The more senses students use to learn the alphabet letter or vocabulary the better. Besides, it is highly recommend it to use a variety of objects for the same letter, that not only would help to increase the vocabulary but also, students would have the chance to label the objects with the sounds using the braille code flashcards. This multisensory activities take time because it allows students to explore the objects, to be involve in real time situations rather than just learn the print form of the word. That is the reason, specialist suggest to present few alphabet letters at a time so students can master phonics in English.

Vocabulary

When teaching vocabulary, Scott Baltisberger (2019) explained that for objects that are too large to fit into a classroom, such as cars or buses, toys are a great tool. However, if instructors also take students to a parking lot to experience an actual bus or car, it would give students, not only the context, but also a meaningful learning experience. Therefore, Romero and Moreno (2010) indicated educators need to put aside verbal and theoretical concepts to start having multisensory activities. Activities that allow visually impaired students to understand the world that they cannot see, but they can feel and experience (p. 63).

Moreover, an early childhood consultant for visually impaired students, explained how to present the colors to this population. Liz Eagan (2014) explained that it is possible for people to feel, taste, or even smell colors, and TESOL instructors could use this ability to introduce colors to students. Eagan (2014) described that instructors should use objects or food that have only one color to help students learn the variety of colors that there are in the world. For example, Eagan (2014) asked students to hold different pieces of wood, touch the bark of a tree, or touch the ground and explain that all these things are brown. The green color feels like the living parts of the plant because when the plants are green, it means they are alive. Eagan (2014) also explained that instructors could give a green and brown leaf to students, then asked them to hear the sound of both leaves. Students would readily associate the crunchy sound with the brown color. Furthermore, Wright (2018) described in her research how colors could also be related to emotions, mind, and body. Wright (2018) explained the color red is the one people get in their cheeks when they blush. Red is also the color people have in their minds when they think about love. The pink color is related to femininity and tranquility. Wright's (2018) research gives instructors ideas on how educating a student with visual impairment implies developing their potential and abilities, by making the most of what the environment offers.

Colors

Matt Kaplowitz (2016) explained that colors are part of our world, and colors are one of the major ways that people identify objects. Therefore, even if these students cannot see colors, this information is vital to them because colors help the words of the books to have meaning, and providing colors and descriptions in detail helps students better understand what they are hearing. Describe colors using emotions, taste, sounds and how color feel to the hands. Here are some ideas on how to describe colors to visually impaired students:

- Blue: water. Explain that the sound of running water, especially a stream bubbling or the ocean waves crashing, should make them think of blue. Explain some people think that blue makes them feel calm and relaxed.
- Red: strawberries, heat, fire, blood. Explain that heat, such as a fire or candle flame, or a hot stove burner, is red. Red can usually be thought of as heat, or even a burn. Indicate to the students that if they ever had a sun burn, their skin turns a red color. Or, if they have felt embarrassed and blushed, that heat on your cheeks looks red. Red makes people think of passion and love.
- Yellow: bananas, sun, prosperity, energy, pineapples. Describe that bananas and pineapples taste like yellow color, which some people relate yellow to prosperity and good energy and the sun in the blue sky has this color.

- Green: lettuce, trees, money, nature. Illustrate that green color makes people think about nature, trees and there are some food that taste like green, for example lettuce, salad and limes.
- Gray: metal, clouds. Explain clouds are grey when it's about to rain or when a storm is coming. Metal, sidewalks are grey and ask students to teach how the color grey feels like in their hands. Describe some people refer to this color to depression.
- Brown: Crunchy leaves, trunk of a tree. Indicate to students that brown color sounds like a crunchy leaves when they fall from a tree. Ask students to touch soil and a trunk of tree.
- Orange: warm feeling, orange fruit. Explain this fruit is also called orange. Make students taste, smell and feel it. Describe some people relate this color to tenderness.
- Black and white. According to the American Foundation for the Blind (2019), only 18% of people who are visually impaired are classified as being totally blind, and the majority of them can differentiate between light and dark. The ability to differentiate between light and darkness can help you to explain black and white, by saying that black is darkness, and white is the presence of light.

When teaching vocabulary to the visually impaired students, instructors need to include in their lesson a variety of objects that allow students to experience, interact and explore the new words or expressions they are trying to learn in different ways, to create meaningful meaning. Explore body movements, real objects or toys close to reality, sounds, feeling, emotions etc., to reinforce concepts and vocabulary.

Reading aloud

As soon as students start having a wider range of vocabulary, TESOL educators can continue to the next step in their instruction, which is reading. Reading improves spelling and supports the development and improvement of language. Reading promotes oral and written expression and makes the language more fluent. For instance, Matt Kaplowitz (2016), Creative Director at Bridge Multimedia, explained how reading aloud to a blind or visually impaired student would create strong readers. Reading increases their vocabulary and their chance to succeed in acquiring a new language. Kaplowitz (2016) affirmed that books have many visual aids, but visually impaired students would not understand the text by just reading the words. Instructors should describe as much as they can about the pictures because the descriptions make books come alive. Consequently, TESOL instructors reading to an ESL visually impaired students need to present the main characters in the tridimensional model to students. Aquino, Martínez, and Izquierdo (2012) explained that if possible, instructors should use textures and materials that are the most lifelike and pleasant to the touch in order to help students to understand the book. Furthermore, Aquino et al. (2012) also clarified there is no need to give a scale model of every picture of the book, but instructors should use materials available in their environment and help students to model facial expressions by allowing students to touch instructors' faces to explain emotions and illustrate how feelings look like on people's faces. From this perspective, Kaplowitz (2016) explained that instructors should choose the right book by reading it first to themselves to check unknown words and find a way to present the book to students. Kaplowitz (2016) added that before reading the book to students, instructors should describe three or four aspects of the main characters, pages, and pictures to students. This activity gives students the context of what they are going to read. Kaplowitz (2016) illustrated the best way to describe pictures to a visually impaired student is to start from the specific to the general because this is the way these students put images together and also, when describing instructors need to include colors. Remember to provide objects related to the story whenever possible, to actively involve the student and make it a concrete experience. Here is an idea on how to create book bags or book boxes to accompany stories and books.

Three little pigs

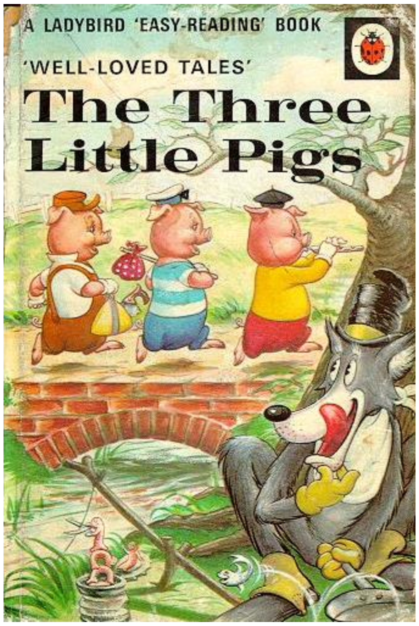
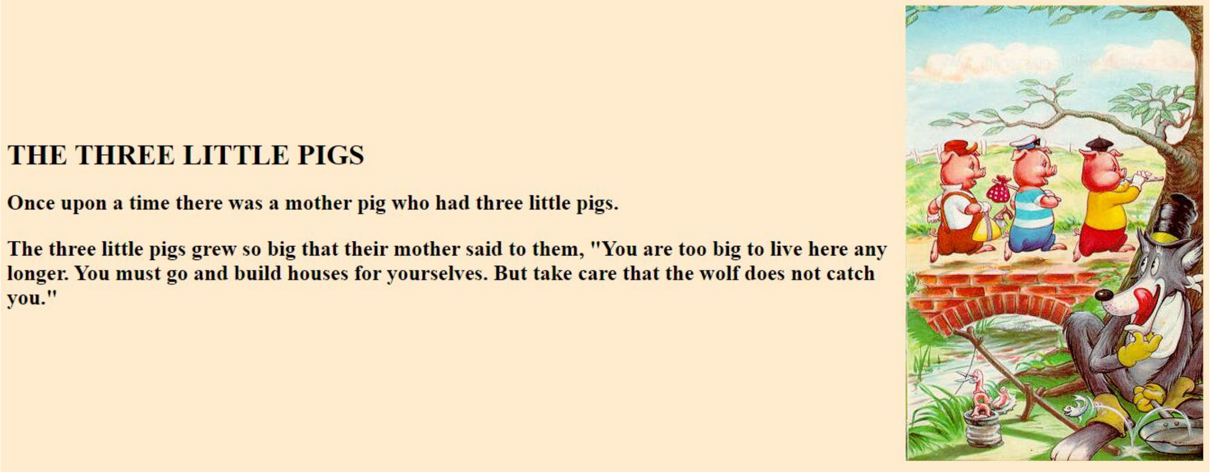


Figure 4.2 screenshot from Three little pigs by Wales Tales

Cover: Read the title and ask students to make inferences about what they think the story is about. Students might also have read the book in their first language, so they could use that previous experience into the target language. Present the three little pigs with stuffed animals, so they can explore how the pigs are like in the story. Describe the cover picture with from the specific to the general. What are the three little pigs wearing, what the weather look like, their expressions or emotions the characters show in the cover of the book.



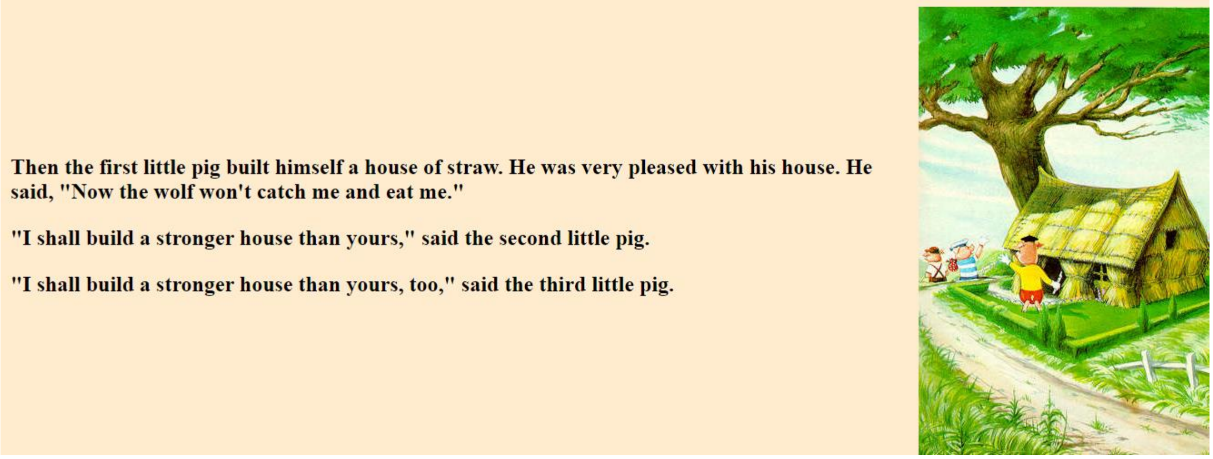
THE THREE LITTLE PIGS

Once upon a time there was a mother pig who had three little pigs.

The three little pigs grew so big that their mother said to them, "You are too big to live here any longer. You must go and build houses for yourselves. But take care that the wolf does not catch you."

Figure 4.3 screenshot from Three little pigs by Wales Tales

Before reading the page, start from how the pigs are walking, allow students to recreate the situation. How happy the three little pigs look like and the expressions of the wolf with his tongue out wanting to eat them.



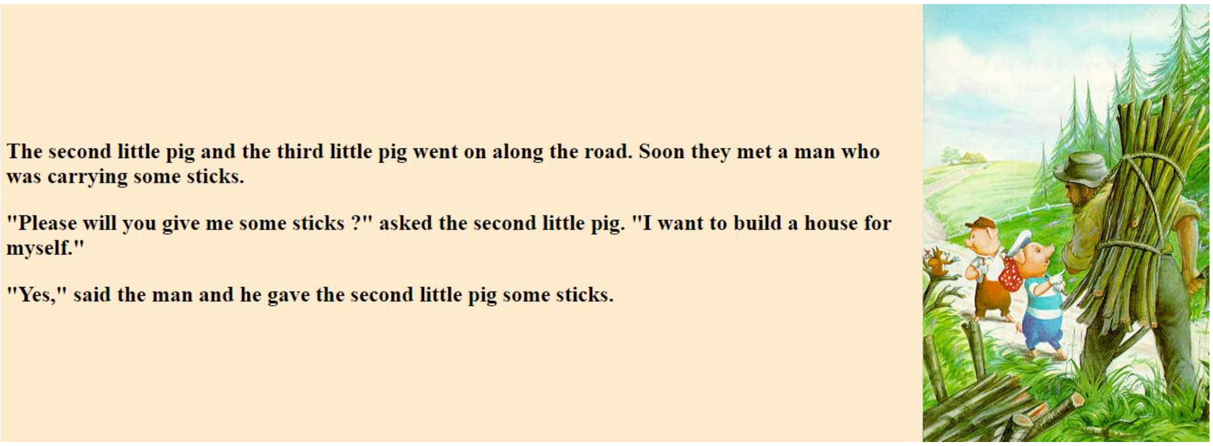
Then the first little pig built himself a house of straw. He was very pleased with his house. He said, "Now the wolf won't catch me and eat me."

"I shall build a stronger house than yours," said the second little pig.

"I shall build a stronger house than yours, too," said the third little pig.

Figure 4.4 screenshot from Three little pigs by Wales Tales

If possible, take real straw to the classroom allowing students to feel the material this character use to construct his house. Ask the students if they think straw is a good material to built a house and why they think that way, then read the page.



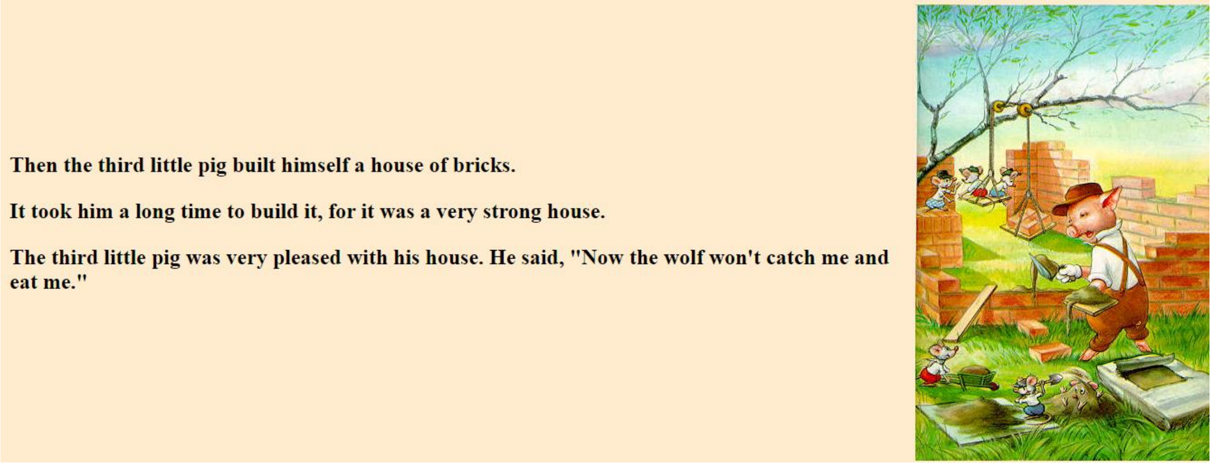
The second little pig and the third little pig went on along the road. Soon they met a man who was carrying some sticks.

"Please will you give me some sticks ?" asked the second little pig. "I want to build a house for myself."

"Yes," said the man and he gave the second little pig some sticks.

Figure 4.5 screenshot from Three little pigs by Wales Tales

Give popsicles sticks to students, ask them to compare the two materials and say which one they think is better and why. Describe the picture with details before reading the page.



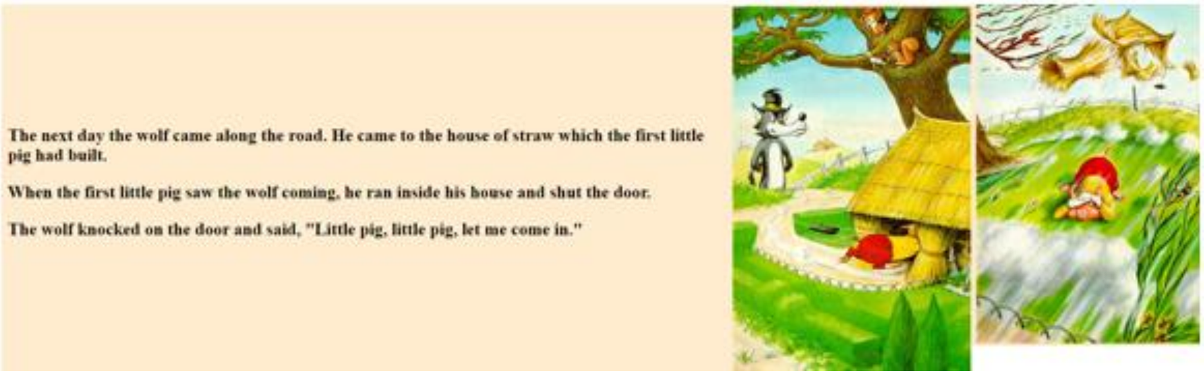
Then the third little pig built himself a house of bricks.

It took him a long time to build it, for it was a very strong house.

The third little pig was very pleased with his house. He said, "Now the wolf won't catch me and eat me."

Figure 4.6 screenshot from Three little pigs by Wales Tales

You can either take a real brick, or a smale scale of it, or just allow students to touch a wall made of brick from the school. Ask them to compare the three materials. Describe how this little pig look like in the pic, how hard he is working building his house.



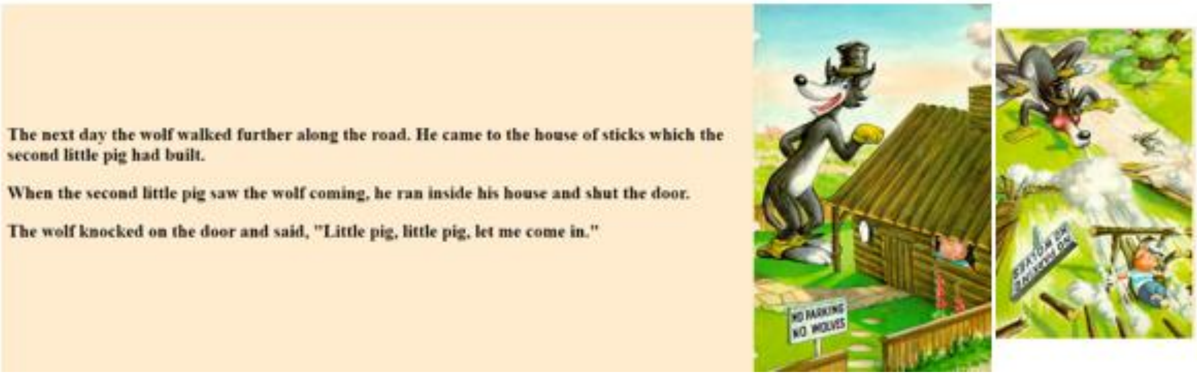
The next day the wolf came along the road. He came to the house of straw which the first little pig had built.

When the first little pig saw the wolf coming, he ran inside his house and shut the door.

The wolf knocked on the door and said, "Little pig, little pig, let me come in."

Figure 4.7 screenshot from Three little pigs by Wales Tales

Describe the picture and allow students to recreate the situation while you are reading. Ask them to blow the straw to see if they can move it with the air, or use an electric fan if possible. Instructors could also use their voice to express how far or close the wolf is to the characters.



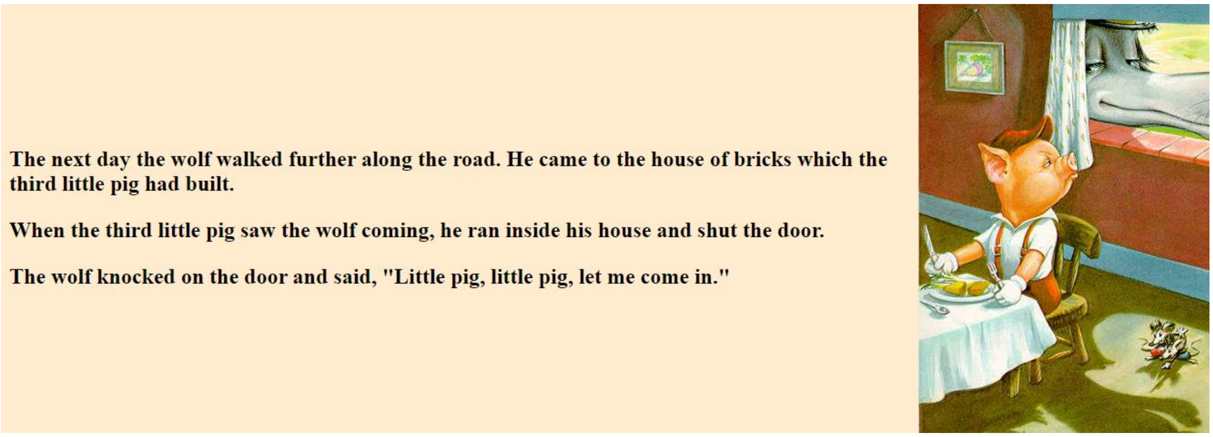
The next day the wolf walked further along the road. He came to the house of sticks which the second little pig had built.

When the second little pig saw the wolf coming, he ran inside his house and shut the door.

The wolf knocked on the door and said, "Little pig, little pig, let me come in."

Figure 4.8 screenshot from Three little pigs by Wales Tales

Ask students how they would feel if they were in the same situation as the three little pigs, to make the reading actively involved.

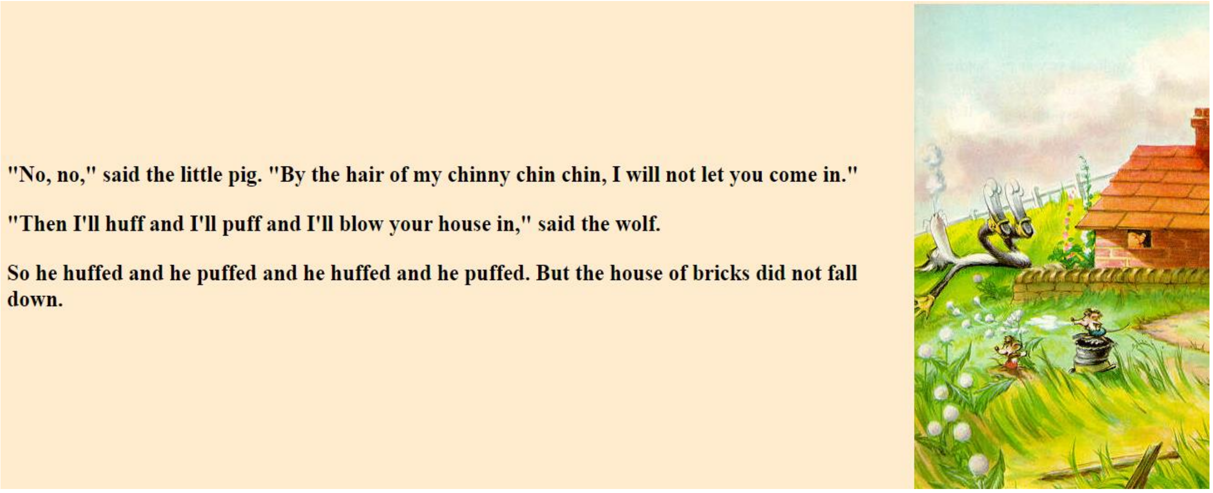


The next day the wolf walked further along the road. He came to the house of bricks which the third little pig had built.

When the third little pig saw the wolf coming, he ran inside his house and shut the door.

The wolf knocked on the door and said, "Little pig, little pig, let me come in."

Figure 4.9 screenshot from Three little pigs by Wales Tales



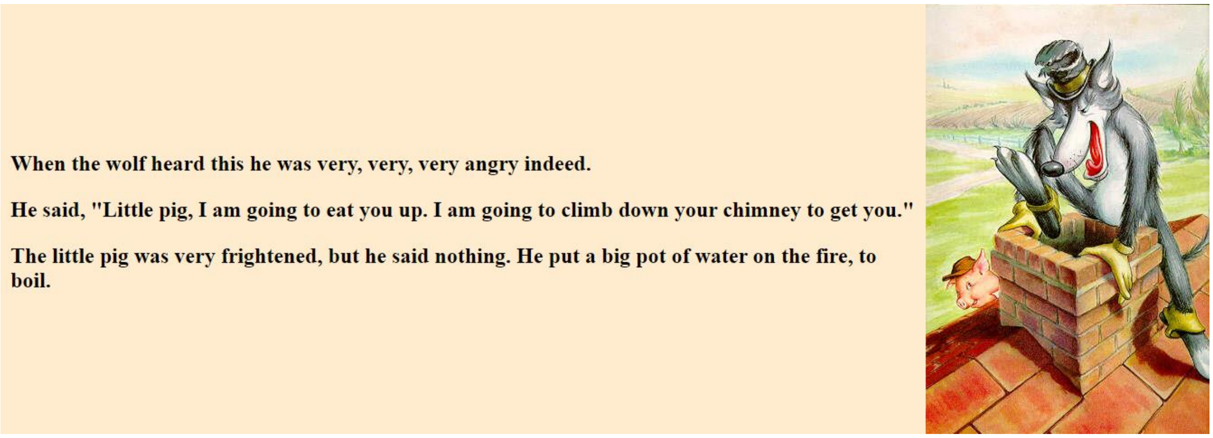
"No, no," said the little pig. "By the hair of my chinny chin chin, I will not let you come in."

"Then I'll huff and I'll puff and I'll blow your house in," said the wolf.

So he huffed and he puffed and he huffed and he puffed. But the house of bricks did not fall down.

Figure 4.10 screenshot from Three little pigs by Wales Tales

Ask students to try to blow bricks to see if they can move it with just air. Recreate the pictures from the book.

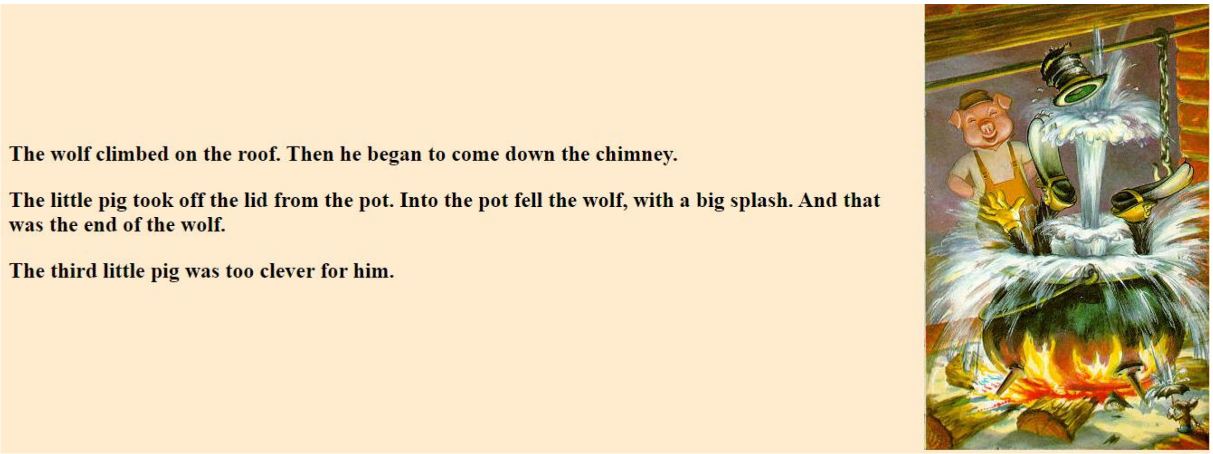


When the wolf heard this he was very, very, very angry indeed.

He said, "Little pig, I am going to eat you up. I am going to climb down your chimney to get you."

The little pig was very frightened, but he said nothing. He put a big pot of water on the fire, to boil.

Figure 4.11 screenshot from Three little pigs by Wales Tales



The wolf climbed on the roof. Then he began to come down the chimney.

The little pig took off the lid from the pot. Into the pot fell the wolf, with a big splash. And that was the end of the wolf.

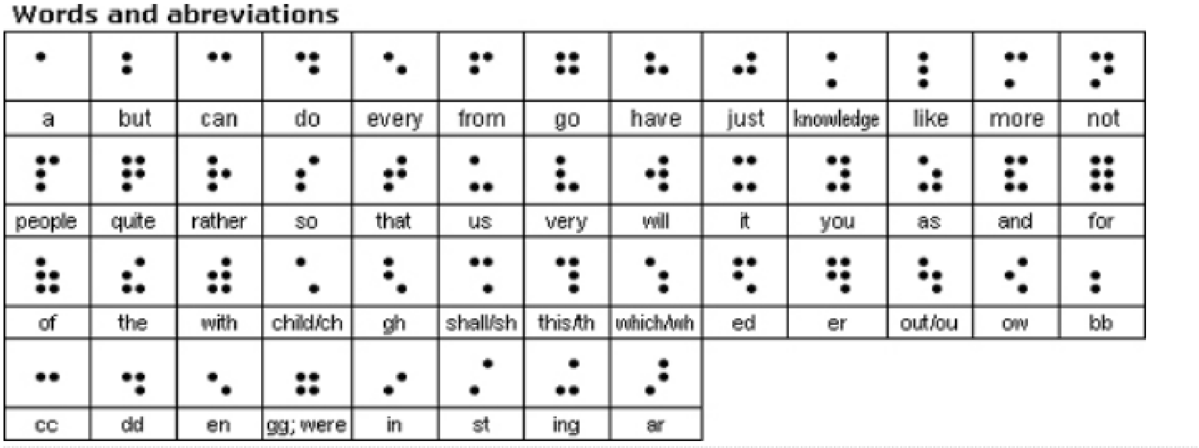
The third little pig was too clever for him.

Braille

Finally, students need to learn braille as a tool for reading and writing, and braille will help visually impaired students to enter to the world of literacy. The American Foundation for the Blind (2019) explained that braille is a system of raised dots that can be read with the fingers by people who are blind or who have low vision. Teachers, parents, and others who are not visually impaired ordinarily read braille with their eyes, and braille is not a language. Instead, Braille is a code by which many languages, such as English, Spanish, Arabic, Chinese, and others read and write. However, TESOL instructors do not need to master the braille code; in fact, Baltisberger (2017) explained that the classroom teacher is not responsible for teaching students braille; this is the role of the specialist. Classroom teachers or TESOL instructors, in this case, are responsible for providing materials to the specialists with reasonable time, so experts can transcribe documents for visually impaired students. Furthermore, Baltisberger (2017) added that to ensure that a blind student with limited English proficiency acquires proficiency in Braille, members of the whole educational team should have a clear understanding of their respective roles and work together in a collaborative approach. Moreover, Morrow (1999) emphasized in her dissertation that it is essential that teachers of the blind and regular classroom teachers of foreign languages develop a means by which to acquire a rudimentary knowledge base in the other's area of specialization in order that dialogues between the two types of professionals can foster positive solutions for students with blindness who are studying a foreign language in the mainstream classroom environment. TESOL instructors should work along with the visual impairment specialist to create material and strategies that help the students in their process of learning a second language.

Consequently, the Tennessee Council of the Blind (TCB) (2010), specified in their article Grade 1 and Grade 2 Braille that there are two forms of braille. TCB (2010) explained that in Grade 1 Braille, each possible arrangement of dots within a cell represents only one letter, number, punctuation sign, or unique braille composition sign. Individual cells cannot represent words or abbreviations in this grade of Braille. TCB (2010) added that Grade 1 Braille (see figure 4.1) is typically used only by those who are new learners of braille, and when students acquire a more extensive understanding of the code, students can proceed to Grade 2 Braille.

TCB (2010) added many cell combinations have been created to represent common words, making this the most popular of the grades of braille, and a single cell represents an entire commonly used word. Also, words may be abbreviated by using a single letter to represent the entire word, using a special symbol to precede either the first or last letter of the word while truncating the rest of the word, using a double-letter contraction such as "bb" or "cc," or removing most or all of the vowels in a word in order to shorten it.



Words and abreviations

⠁	⠃	⠉	⠙	⠑	⠋	⠛	⠓	⠚	⠅	⠇	⠍	⠝
a	but	can	do	every	from	go	have	just	knowledge	like	more	not
⠏	⠟	⠗	⠎	⠞	⠥	⠧	⠺	⠭	⠽	⠵	⠯	⠿
people	quite	rather	so	that	us	very	will	it	you	as	and	for
⠷	⠮	⠾	⠡	⠣	⠩	⠹	⠱	⠫	⠻	⠳	⠪	⠆
of	the	with	child/ch	gh	shall/sh	this/th	which/wh	ed	er	out/ou	ow	bb
⠒	⠲	⠢	⠶	⠔	⠌	⠬	⠜					
cc	dd	en	gg; were	in	st	ing	ar					

Figure 4.13 screenshot from robo braille

Instructors need to understand that helping students who have visual impairments might represent a very diverse group of learners. The level of disability is influenced by environmental factors, other disabilities, and the type and degree of visual impairment. Visual impairments may affect the student’s acuity, the student’s visual field, and/or the student’s ability to process visual information (Sacks, 1998, p. 35). Because each factor has significant implications for effective instruction, it is essential that the team to work closely with the child’s family, physicians, and vision teacher to understand the nature of the child’s visual impairment and ensure that proper techniques and strategies are used to maximize the student’s ability to access visual information and use compensatory strategies (Sacks, 1998, p. 42).

Highlighting the challenging field of teaching languages for the visually impaired learners, researchers such as Baltisberger (2017) and Romero and Moreno (2010) have suggested that the foreign language needs of the visually impaired learners should be focused more on including more activities involving the sense of touch and hearing, in other words multisensorial activities to accommodate the visually impaired learners and make their learning a meaningful experience. Moreover, Aquino et al. (2012) explained that many visually impaired students can be placed into regular classroom settings, so instructors should provide a multisensory approach to convey crucial foreign language information. In this way, students (sighted or blind students) who encounter learning deficits in one specific area will have the opportunity to learn the material through its multifaceted presentation.

In addition, regular classroom teachers should make an effort to establish a rapport with those in supporting roles who deal with students with disabilities on a daily basis (Morrow, 1999, p. 180). TESOL instructors need to work together with the specialist of the visually impaired students to find the best learning strategies for this population. Finally, further research is needed, especially related to the importance of learning strategies in special education.

Chapter 5: Conclusion

A visible result of globalization in the educational environment is the diversity of students that educators have in the classrooms, a variety of students with different cultures and languages. Therefore, the challenges TESOL instructors face in their classes can be numerous, including students' personal experiences, previous literacy practices, understanding students' diverse backgrounds to gain relevant knowledge of the contexts where students come from, etc. That information helps instructors as a tool to make connections with their students by creating lesson plans according to their needs. However, diversity is, not only a principle that recognizes and legitimizes cultural differences between different human groups within the same geographical space, but also diversity can be understood among our students' abilities and disabilities. In this project, it is intended to address the learning needs that have immigrant visually impaired students. In that way, learning English is challenging, but it can be a magnified situation if a student is visually impaired.

TESOL instructors frequently rely on visual aids, body language, pictures, drawings to teach in the classroom; however, educators must reflect and modify their practices when they have a visually impaired student in a regular classroom setting. The goal of this research is to promote specific teaching strategies for ELLs who are also visually impaired students. These strategies include the exploration of other senses through multisensory activities, hands-on experiences and the use of materials that allows students to use the remain senses that they have. Also, these activities would enable students to understand a world that they cannot see but feel and experience. As a result of these findings, the final product of this project is a handbook with specialized strategies that would, not only help to develop concepts of phonics, vocabulary, ideas for reading aloud, but also the strategies are adaptable to the needs of the students and class.

While working on this project, I was able to look back at the time when I had for a brief period of time a student with visual impairment in my classroom, and it was frightening experience but challenging at the same time. I learned basic braille and tried to give material to my student in braille as well. However, I was wondering what I would have done differently if I had more time and knowledge of this impairment back then. I really hope this project will encourage ELL teachers to find more strategies, ideas, and activities that help this population to learn a language in a meaningful way, to keep investigating about this topic that seems unnoticed, and contribute to overcome obstacles students with this impairment might face in their learning experience. Furthermore, TESOL instructors and specialist educators should work together to improve the students´ learning environment, and each professional could focus on their area of expertise to find the best teaching strategies for students and classes.

Finally, when reviewing the literature on teaching ELLs to immigrant visually impaired students, I realized that they was little research focused on teaching a student that is, not only an immigrant, but blind as well. Educators need to add studies that contribute to the full integration of the blind population through a solid and competitive educational strategies that help in the learning of foreign languages; a field in which sight is not essential but invites teachers to reflect and provide students with different strategies to help them succeed when learning a second language.

References

American Foundation for the Blind. (2012). Expanded core curriculum (ECC)-Introduction: What is core curriculum. Retrieved from https://www.govinfo.gov/content/pkg/FR-2000-06-08/html/00-14485.htm

Aquino Zúñiga, S. P., García Martínez, V., & Izquierdo, J. (2012). La inclusión educativa de ciegos y baja visión en el nivel superior: Un estudio de caso [Educational inclusion of the blind and visually impaired students. Higher education. A Case Study]. *Sinéctica*, (39), 01-21. Retrieved from http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1665-109X2012000200007&lng=es&tlng=es.

Araluce, H. A. (2009, March 4). Material didáctico para alumnos invidentes en el aula de inglés [Teaching material for blind students in the English classroom.].Retrieved October 21, 2019, from http://www.deficienciavisual.pt/txt-materialdidacticoaulaingles.htm

Baltisberger, S. (2017, June 11). Spanish braille and English language learners. [Web log post] Retrieved from http://www.pathstoliteracy.org/blog/spanish-braille-and-english-language-learners

Blindness and vision loss: MedlinePlus Medical Encyclopedia. (2019). In *MedlinePlus - Health Information from the National Library of Medicine*. Retrieved October 2, 2019, from https://medlineplus.gov/ency/article/003040.htm

Blindness Statistics [National Federation of the Blind]. (2016, January 4). Retrieved from https://nfb.org/resources/blindness-statistics

Carney, S., Engbretson, C., Scammell, K., & Sheppard, V. (2003). Teaching Students with Visual Impairments. A guide for the support team [pdf] (p. 47). Saskatchewan Learning.

Cloud, N., Genesee, F., & Hamayan, E. (2000). *Dual language instruction: A handbook for enriched education*. Boston: Heinle & Heinle.

Council of Chief State School Officers (CCSSO) and the National Governors Association Center for Best Practices (NGA Center). (2019). *About the standards*. Retrieved from http://www.corestandards.org/about-the-standards/

Dunlea, A. (1989). Vision and the emergence of meaning. *Language Teaching, 41*(3), 445-457 doi:http://dx.doi.org/10.1017/S0261444808005107

Discretionary projects supported by the Office of Special Education Programs under the *Individuals with Disabilities Education Act: Research, Innovation, and valuation* Volume 1, Fiscal Year 2004.

Developing the best education for your child with blindness or visual impairment. (2016). *Perkins School for the Blind.* Retrieved from https://www.perkins.org/sites/default/files/perkins-expanded-core-curriculum-booklet.pdf

Douglas, G., & McLinden, M. (2005). Visual impairment. In A. Lewis & B. Norwich (Eds.), *Special teaching for special children? Pedagogies for inclusion* (pp. 26– 40). Maidenhead, UK: Open University Press.

Douglas, G., McCall, McLinden, M., & Pavey, S., Ware, J. & Farrell, A. (2009). International review of the literature of evidence of best practice models and outcomes in the education of blind and visually impaired children. *National Council for Special Education*.

DO-IT Disabilities, Opportunities, Internetworking, and Technology. (2019, May 30). How are the terms low vision, visually impaired, and blind defined? Retrieved from https://www.washington.edu/doit/how-are-terms-low-vision-visually-impaired-and-blind-defined

Eagan, L. (2014, July 30). Tactile color words book. Retrieved from http://www.pathstoliteracy.org/strategies/tactile-color-words-book

Ellis, R. (2016, October 16). Teaching an ELL who is deafblind. [Web log post] Retrieved from http://www.pathstoliteracy.org/blog/teaching-ell-who-deafblind

Euroblind. (2014, February 26). L'Enseignement des Langues aux Adultes Déficients Visuels: propositions pour une pédagogie innovante. Retrieved from http://www.deficienciavisual.pt/txt-Enseignement_langues_adultes_DV.htm

Foster, A., & Resnikoff, S. (2005). The impact of vision 2020 on global blindness. Eye, 19(10), 1133-1135. doi: 10.1038/sj.eye.6701973

Kaplowitz, M. (2016). Ten tips for reading aloud to a blind child. National Braille Press. Retrieved from https://www.nbp.org/ic/nbp/programs/gep/ge_tips.html

Kocyigit, N., & Artar, P. S. (2015). A Challenge: Teaching English to Visually-impaired Learners. Procedia - Social and Behavioral Sciences, 199, 689-694. doi:10.1016/j.sbspro.2015.07.599

Levenson, J.H., & Kozarsky A. (1990). Visual acuity. In H. K. Walker., W. D. Hall & J. W. Hurst (Eds.), Clinical methods: The history, physical, and laboratory examinations (3rd ed.), (pp. 352-354). Boston: Butterworths. Chapter 115. Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK219/

Larsen-Freeman, D. (1991). Second language acquisition research: Staking out the territory. TESOL Quarterly, 25(2), 315-350. doi:10.2307/3587466

Miller C. (2003, September 3). What is the Expanded Core Curriculum for blind and visually impaired students. Texas School for the Blind and Visually Impaired. Retrieved from http://www.tsbvi.edu/seehear/winter01/core.htm

Morrow, K. A. (1999). Blind secondary and college students in the foreign language classroom: Experiences, problems and solutions (Doctoral dissertation, University of Kansas). Retrieved from https://files.eric.ed.gov/fulltext/ED432845.pdf

Partenariat Educatif Grundtvig. (2010). “Pédagogie et apprentissage des langues pour les adultes aveugles et malvoyants en Europe” ["Pedagogy and Language Learning for Blind and Visually Impaired Adults in Europe."]. EuroBlind. Retrieved from http://www.euroblind.org/sites/default/files/media/languages/Languages_FR.pdf

Pigozzi, M.J. (2004) The ministerial viewpoint on `Quality Education.' Prospects, 34(2), 141-149. https://doi.org/10.1023/B:PROS.0000037135.26515.2e

Program of the European Union. (2015). Teaching Foreign Languages to Students who are Blind. (p.13) Retrieved from https://robobraille.org/sites/default/files/resourcefiles/teaching_foreign_language_-_blind.pdf

Romero Caballero, G. C., & Moreno Moreno, J. K. (2010). L`enseignement du FLE aux jeunes non-voyants de 16 et 20 ans [FLE Teaching to blind 16 and 20-year-olds students]. (p 63) (Master's thesis, UNIVERSIDAD DE LA SALLE, Bogotá, Colombia). Retrieved from http://repository.lasalle.edu.co/bitstream/handle/10185/7851/T26.10%20R664e.pdf?sequence=1&isAllowed=y

Regional Bilingual Education Resource Network (2006). Scaffolding and Differentiation to Meet the Needs of ELLs [pdf] (p. 35). Retrieved from http://www.ocmboces.org/tfiles/folder922/Scaffolding_%26_Differentiation_PPv.pdf

Schwed, A., & Melichar-Utter, J. (2007). Pumping up memory with muscles: Running on the Bodily/Kinesthetic Track. In Brain-Friendly Study Strategies, Grades 2-8: How Teachers Can Help Students Learn (1st ed., pp. 88-89). Thousand Oaks, CA: Corwin Press.

Taylor, D. (2018, November 29). American with disabilities. United States census bureau. Retrieved from https://www.census.gov/en.html

Teaching foreign languages to students who are blind. (2015). (p13). Programme of the European Union. Retrieved from https://robobraille.org/sites/default/files/resourcefiles/teaching_foreign_language_-_blind.pdf

Using the senses: Developing the senses in a multiply disabled child. (2016). FamilyConnect. Retrieved from https://www.familyconnect.org/info/multiple-disabilities/learning/using-the-senses/135

U. S. Department of Education. Office for Civil Rights. (2010). Free appropriate public education for students with disabilities: Requirements under Section 504 of the Rehabilitation Act of 1973, Washington, D.C.

Visual acuity. (2012). Medical Dictionary for the Health Professions and Nursing. Retrieved from https://medical-dictionary.thefreedictionary.com/visual+acuity

Visual field: MedlinePlus Medical Encyclopedia. (2019). In MedlinePlus - Health Information from the National Library of Medicine. Retrieved November 2, 2019, from https://medlineplus.gov/ency/article/003879.htm

What is braille: Grade 1 and Grade 2 Braille. (2010, August 10). The Tennessee Council of the Blind (TCB). Retrieved from http://www.acb.org/tennessee/braille.html

Willings, C. (2019, August 4). Expanded core curriculum instruction for students who are blind or visually impaired. Name of website here in italics. Retrieved from https://www.teachingvisuallyimpaired.com/ecc.html

Wright, A. (2018). Psychological properties of colours - Colour Affects. .Retrieved from http://www.colour-affects.co.uk/psychological-properties-of-colours

Willoughby, D., Monthei, S. (1998). Modular instruction for independent travel for students who are blind or visually impaired preschool through high school.(p.22) National Federation of Blind